11 Suicide Prevention in Schools

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Suicide consistently ranks as the second or third leading cause of death for adolescents. Between 1960 and 1990, the suicide rate for 15- to 19-year-olds more than tripled from 3.6 to 11.3 per 100,000. From 1991 to 1996, the average suicide rate for this age group was 10.56. The suicide rate for 10- to 14-year-olds has increased 120% from 1980 (0.8) to 1996 (1.7). This ominous increase in the rates for the younger age groups appears to be following the trends for substance abuse. Among youths aged 15-19, firearm-related suicides accounted for 81% of the increase in the overall rate since 1980. The incidence of suicide *attempts* is considerably higher, with around 10% of adolescent respondents reporting attempts in various surveys (Centers for Disease Control and Prevention, 1995).

These trends spawned a variety of youth suicide-prevention initiatives, the vast majority of which were school-based prevention and intervention programs (Leenaars & Wenckstern, 1991). Following a period of declining interest in these programs in the mid-1990s, a renewed interest in school-based prevention has been spurred by the Surgeon General's Call to Action to Prevent Suicide (U.S. Public Health Service, 1999) and the National Strategy for Suicide Prevention: Goals and Objectives for Action (U.S. Public Health Service, 2001). These reports included a recommendation for developing safe and effective programs in educational settings for youths that address, among other things, peer support for seeking help.

The School Context

Any effort to implement and sustain a suicide prevention initiative in schools must take into account the characteristics of schools that make them uniquely suited for prevention, as well as the constraints that limit what schools can do in this area. Thus, a central aim of this chapter is to describe what programmatic effort schools can reasonably be expected to carry out in regard to suicide prevention.

The Report of the Second World Conference on Injury Control (Injury Control in the 1990s, 1993) recommended the following steps to reduce violence and suicide: programs to improve recognition, referral, shelter, and long-term therapeutic interventions for people at high risk for violent injury; programs to address not only the behavior of individuals, but also the behavior of community institutions and the community environment; and better dissemination of educational materials to people who have influence or access to people at risk.

As the community institution that has primary responsibility for socialization of youths, the school has substantial influence and access to at-risk youths. School education codes and statutes include the mandate to not only educate, but also to protect students (Davis & Sandoval, 1991). Thus, schools offer a logical setting for preventive interventions.

However, the responsibility for socialization and protection now carries with it the burden of dealing with youths coming from environments characterized by what Dryfoos (1994) called the "new morbidities" such as family disintegration, substance abuse, interpersonal violence, and sexually transmitted diseases. Along with these developments have come waves of school "reform" and a plethora of individual, or categorical, programs aimed at these risk behaviors.

The increasing demands on schools dictate that suicide-prevention programs (a) have a clear conceptual and empirical base; (b) fit within school mandates and culture; (c) use proven implementation and instructional strategies; (d) include all appropriate components of the school and community (that is, they must be comprehensive and ecological or systemic); and (e) be efficient in the use of school resources.

The following sections review the research that informs school prevention programs and describe some school programs that draw on this research. The chapter concludes with an overview of comprehensive school suicide-prevention programs and the current empirical support for such programs.

Conceptual/Empirical Base

According to Caplan's (1964) classic paradigm, disorders can be prevented by reducing stressors or risk factors and/or enhancing supports or protective factors. Risk and protective factors are characteristics of individuals and/or their environments that increase or decrease, respectively, the probability of suicidal behavior. Research has begun to identify risk factors for suicide and to specify particularly potent combinations of these risk factors (Stoelb & Chiriboga, 1998; U. S. Public Health Service, 1999; U.S. Public Health Service, 2001). These risk factors are listed in Table 1.

It should be noted that even the presence of potent combinations of risk factors results in high rates of false positives, thus attenuating their efficiency for identifying suicidal individuals. In addition, aside from the first three, these risk factors are not specific to suicide. That is, they are associated with a broad array of other disorders,

Table 1

Risk Factors

- Previous suicide attempt
- Current ideation, intent, and plan (resolve)
- Exposure to suicide and/or family history of suicide
- Mental disorders—particularly mood disorders such as depression and bipolar disorder
- Personality disorders (conduct and borderline)
- Influence of significant people—family members, celebrities, peers who have died by suicide—both through direct personal contact or inappropriate media representations
- Local epidemics of suicide that have a contagious influence
- Co-occurring mental and alcohol and substance abuse disorders
- Hopelessness and helplessness
- Impulsive and/or aggressive tendencies
- Barriers to accessing mental health treatment
- Relational, social, work, or financial loss
- Physical illness
- Easy access to lethal methods, especially guns
- Unwillingness to seek help because of stigma attached to mental and substance abuse disorders and/or suicidal thoughts
- Cultural and religious beliefs—for instance, the belief that suicide is a noble resolution of a personal dilemma
- Isolation, a feeling of being cut off from other people
- Ineffective coping mechanisms and inadequate problem-solving skills
- A confluence of multiple stressors (discipline, rejection/humiliation, end of romantic relationship, conflict with family or peers, unmet school goals)

which are themselves often employed as predictors of youth suicide. Suicide is not a disease caused by specific agents, but is multiply determined and is comorbid with other disorders and destructive behaviors.

In addition, researchers have identified stressful events that often precede suicide in youth (Gould & Kramer, 2001; U.S. Public Health Service, 2001). Rather than causes of suicide, these precipitants appear to trigger suicidal behavior in vulnerable youths. These possible precipitants are listed in Table 2, on page 214.

All school personnel should be familiar with risk factors and precipitants. Some schools may be able to address some of these factors through comprehensive, on-site mental health services (Adelman & Taylor, 1997). Selected school personnel, particularly school screening and crisis response teams, can be trained to identify more effectively depressed and/or anxious youths. In general, however, typical school systems can address few factors on this list without considerable and sustained additional resources.

Table 2

Possible Suicide Precipitants

- Getting into trouble with authorities (e.g., school, police); not knowing and afraid of the consequences.
- Breakup from boyfriend or girlfriend.
- Death of a loved one or significant person.
- Disappointment and rejection such as a dispute with boy/girlfriend, failure to get a job, or rejection from college.
- Bullying or victimization.
- Conflict with family or family dysfunction.
- Disappointment with school results or school failure.
- High demands at school during examination periods.
- Unwanted pregnancy, abortion.
- Infection with HIV or other sexually transmitted diseases.
- The anniversary of a death of a friend or loved one.
- Knowing someone who committed suicide.
- Separation from friends, girlfriends/boyfriends.
- Real or perceived loss.
- Serious physical illness.
- Serious injury that may change the individual's life course.

Screening programs have been promoted to schools (Shaffer, 1999), but these are costly and require active parental consent. Moreover, because students' reported suicidal feelings are not stable or consistent, multiple screenings per year would be required. Thus, such programs fall outside of regular school mandates and are an inefficient use of resources.

On the other hand, the promotion of protective factors appears to be within the purview of schools. Protective factors that have been associated with preventing destructive behaviors are:

- Personal characteristics such as positive disposition and problem-solving ability.
- Contact with a caring adult.
- A sense of connection with school or community that is based on opportunities to participate and make contributions.

These characteristics can attenuate the likelihood of destructive behaviors, even by those who experience one or more risk factors. Some prospective studies have found these protective factors to be more powerful predictors of outcomes than risk factors (Jessor, Van Den Bos, Vanderryn, Costa, & Turbin, 1995). Furthermore, these appear to be general protective factors that moderate a variety of risk factors, including sub-

stance abuse, delinquency, violent behavior, and suicide (Elias, Gara, Schuyler, Branden-Muller, & Sayette, 1991; Evans, Smith, Hill, Albers, & Nuefeld, 1996; Jessor, et al., 1995; McBride et al., 1995). Therefore, efforts to promote protective factors would be an efficient prevention strategy for schools. Clearly, the promotion of problem solving and an environment that supports participation and contact with caring adults and fostering a sense of belonging to the school is within the education, socialization, and protection mandates of schools.

Modifying school environments and implementing multigrade social skills and problem-solving programs take time, and these efforts will not prevent the occurrence of all suicidal feelings, plans, or attempts (Weissberg & Elias, 1993). Therefore, another role for schools in the prevention of suicide involves identifying and responding to at-risk students. A focused, efficient, categorical program is needed to establish this capacity. The role of schools in this endeavor is critical, but is limited to the identification and subsequent referral to a specialized school or to community-based mental health services.

School-Based Suicide-Response Programs

School-based suicide-prevention programs can fall into any one of three categories developed by the Institute of Medicine (1994):

1. *Universal* interventions, which are directed at an entire population rather than selected subpopulations or individuals. The generic programs that promote protective factors are examples of this type of intervention, as are the comprehensive programs described in the next section.

2. *Selective* interventions, which are targeted to subpopulations that are characterized by shared exposure to some epidemiologically determined risk factor(s). For example, students at critical transitional periods, such as entering middle school or high school, can be at greater risk for a variety of adjustment and/or academic problems.

3. *Indicated* interventions, which are targeted to specific individuals who are already at preclinical levels of a disorder and who have been identified through screening procedures. For example, students who self-identify or who are identified by others as having suicidal thoughts or plans are referred for an appropriate treatment.

It is important to note that these are complementary, not competing, approaches [National Institute of Mental Health (NIMH), 1995]. Schools are encouraged to use universal, selective, and indicated prevention strategies as part of a comprehensive strategy.

Eggert and her colleagues have reported controlled studies that evaluated the implementation fidelity and proximal outcomes of a conceptually grounded, indicated prevention program (Eggert, Thompson, Herting, & Nicholas, 1995; Thompson,

Eggert, Randell, & Pike, 2001). Participants were identified through a screening procedure that first identified potential dropouts and then screened these students for suicide risk. The 12 sessions emphasized coping and problem solving as well as establishing a connection with the school. Interestingly, both the 12-session intervention and the comparison condition, which consisted of a 2-hour assessment interview, a brief counseling interview, connection with a specific school-based adult, and a parent contact, were associated with reductions in suicide risk behaviors, depression, anger control problems, and family distress. This result is encouraging in that with training, schools may be able to intervene effectively with identified suicidal students with a relatively brief, focused intervention.

Universal suicide-prevention programs are designed to prepare the entire school community to respond to youths at risk for suicide, and they can incorporate the characteristics of effective and efficient programs noted in this chapter. The overall goals of the universal program are to increase the likelihood that school gatekeepers (administrators, faculty, staff, and peers) who come into contact with at-risk youths can more readily identify them, provide an appropriate initial response, know how to obtain help for them, and are *consistently inclined* to take such action.

These goals are based on the following findings:

- Most suicidal youths confide their concerns to peers rather than to adults (Dubow, Kausch, Blum, Reed, & Bush, 1989; Kalafat & Elias, 1992).

- Disturbed youths (e.g., depressed, substance abusers) prefer peer support over adult support more than do their nondisturbed peers (Naginy & Swisher, 1990; Offer, Howard, Schonert, & Ostrov, 1991).

- Some adolescents, particularly males, do not respond to troubled peers in empathic or helpful ways (Norton, Durlak, & Richards, 1989; Wellman & Wellman, 1986).

- As few as 25% of peer confidants tell an adult about their troubled or suicidal peer (Kalafat & Elias, 1992; Kalafat, Elias, & Gara, 1993).

- School personnel are consistently among the *last* choices of adolescents for discussing personal concerns. Therefore, the reluctance of adolescents to seek out helpful adults is considered to be a *risk factor* that contributes to destructive outcomes associated with a variety of adolescent risk behaviors (Lindsey & Kalafat, 1998).

- There is also evidence that *provision* of help by youths may be beneficial: participation in helping interactions can shape prosocial behaviors and reduce problematic behavior and is related to indices of social competencies that can carry over to other challenging situations (Allen, Aber, & Leadbeater, 1990).

To meet these goals, comprehensive universal suicide-prevention programs include the following components, usually implemented in this order:

1. *Administrative consultation* to ensure that policies and procedures for responding to at-risk students, attempts, and completions are in place and to ensure that community linkages exist for close coordination of referrals to, and return of students from, community gatekeepers. This one-time consultation usually takes a number of hours depending on the current status of the particular school.

2. *School gatekeeper training* for all faculty and staff (including such staff as bus drivers and cafeteria workers) on the identification of, initial response to, and effective referral of troubled and at-risk students. This training includes the role of the school, risk factors and warning signs, myths about suicide, guidelines for initial response and referral, a review of school policies, and school and community resources. This step sometimes includes the establishment of in school crisis response teams made up of faculty, staff, and administrators. The gatekeeper training can be accomplished in two hours and can be repeated every two years or so.

3. *Parent training* covering material similar to the school gatekeeper training, as well as means restriction strategies. This is usually a 1.5-hour presentation that is often coupled with other presentations or activities. Often parents do not see the relevance of suicide prevention to their own children; therefore, other activities are planned.

4. *Community gatekeeper training* that incorporates policies and procedures for effective response and coordination with schools and families. This step sometimes includes training in the treatment of depressed and suicidal adolescents, because this competency cannot be assumed. This component is not the responsibility of the school, but must be in place if the school is to have a reliable referral source. Community crisis teams and media campaigns have also been implemented as part of the community effort.

5. *Student classes*, which usually consist of four to five class periods included in the health curriculum. The classes can be used with any grade from 8 through 12, but are usually given in 8th or 9th grade, with short boosters in later grades.

Again, general programs on problem solving, self-esteem, and the like can form a foundation in elementary grades for this categorical suicide-response program. Classes include a variety of media that involve students in discussions and role-playing to prepare them to recognize and respond to troubled peers and to destigmatize seeking adult help. These classes do *not* aim to address suicidal feelings or behaviors; rather, they emphasize *help-seeking* skills and resources, and are primarily aimed at students who often come in contact with at-risk peers, and are secondarily aimed at the at-risk students themselves. The focus on help-seeking is relevant to other risk behaviors such as

interpersonal violence, because recent events have shown that peers and adults often knew of warning signs but failed to take action (Vossekuil, Reddy, Fein, Borum & Modzeleski, 2000). Because the classes address more than one risk behavior, they are an efficient use of school resources.

These components address the comprehensive and ecological criteria, although more work must be done in most schools to increase the psychological, temporal, and cultural accessibility of adults if students are to follow through with the lessons learned in the health classes (Lindsey & Kalafat, 1998).

Such a universal prevention program fits within the school's resources and culture because it is a turnkey program that has an educational focus. The classroom curriculum consists of packaged, self-contained lesson plans for teachers to provide, and fits within the existing curriculum structure without requiring pull-out activities. The curriculum also uses appropriate instructional principles such as participatory activities, skills practice and feedback, and reinforcement and acknowledgment of students' experience (in dealing with troubled peers).[1]

Evaluation of School-Based Programs

Evaluations of programs implemented in the early 1980s to respond to concerns about youth suicide were mixed, suggesting that programs lacked sufficient focus and had not reached a point where their status could be evaluated (Overholser, Hemstreet, Spirito, & Vyse, 1989; Shaffer, Garland, Vieland, Underwood, & Busner, 1991; Spirito, Overholser, Ashworth, Morgan, & Benedict-Drew, 1988; Wholey, 1979). In program evaluation parlance, these are referred to as first-generation programs because it is recognized that program development and evaluation occur in an iterative cycle.

Drawing on the experiences of the initial programmatic efforts, many second-generation programs were more focused on preparing students to respond to encounters with at-risk peers and to seek adult help. Controlled evaluations of these programs have been more promising, suggesting that carefully implemented classroom curricula may enhance the inclination of students to obtain adult help for troubled peers (Ciffone, 1993; Kalafat & Elias, 1994; Kalafat & Gagliano, 1996).

Drawing on the findings of impaired problem solving among suicidal youths, Orbach and Bar-Joseph (1993) evaluated a universal prevention program that included a wide range of topics: depression and happiness, family issues, feelings of helplessness, coping with failure, coping with stress and problem solving, and coping with suicidal urges. Significant positive changes were found for the class participants compared with controls in reduction of suicidal feelings, increased ego identity cohesion, and ability to cope with problems.

In regard to school gatekeeper training, one study (Shaffer, Garland, & Whittle, 1988) found that one two-hour presentation to educators resulted in significant

increases in knowledge of suicide warning signs and community resources. Reisman & Scharfman (1991) reported positive effects on guidance counselors' knowledge, attitudes, and referral practices after a six-session training program.

It must be noted that changes in knowledge and attitudes do not necessarily translate into changes in behavior. Research needs to be done that provides evidence for the relationship between these proximal outcomes and intermediate behavioral outcomes such as increased identification and referral of at-risk youths by school-based adults and students. A systemic approach to suicide prevention also requires the effective treatment and follow-up of identified youths (Kalafat, 2001). Moreover, in order to assess distal program effects (reduction of suicide rates) programs must be:

- Carefully implemented with fidelity.
- Designed to address multiple levels of school and community contexts (i.e., administrative policies and procedures; education for all school staff; classroom curricula; parent education; connections between school and community gatekeepers).
- Disseminated to enough sites to obtain large population samples for epidemiological impact assessment.
- Institutionalized over sufficient length of time in order to detect epidemiological trends.

Data are available from two programs that meet these criteria. The programs were developed and implemented by a county (New Jersey) community mental health center (Kalafat & Ryerson, 1999) and a county (Florida) public school Department of Crisis Management (Zenere & Lazarus, 1997). Each program was systematically disseminated and sustained over a period of 10 years in schools in both urban and suburban counties. Each program aimed to prepare schools and communities to identify, respond to, and obtain help for at risk youths, as well as covered other health topics such as substance abuse, coping, and self-efficacy.

The Miami-Dade County Public School (M-DCPS) program included additional health promotion programming for elementary and middle schools. The elementary school curriculum focuses on self-awareness development, communication skills, decision-making skills, drug information, and development of positive alternatives. The middle school curriculum stresses assertiveness, stress management, decision making, and conflict resolution. The topic of suicide is formally introduced in the 10th grade in a mandatory, one-semester curriculum entitled Life Management Skills.

These two programs were comprehensive in that they promoted linkages among school and community services and included school-based crisis teams, community crisis response capability, administrative polices and procedures, training for school personnel, parents, students, and, to a lesser extent, community gatekeepers. Follow-up

studies showed a reduction in county youth suicide rates associated with the dissemination of the programs that was not replicated for the states or nationally for the same time periods (Kalafat, 2000). It was particularly noteworthy that no student who was identified by the Florida program as experiencing a suicidal ideation or suicidal attempt and therefore received intervention from M-DCPS later committed suicide. On the negative side, a review of the M-DCPS students who completed suicide between the 1989-1990 and 1993-1994 period revealed no reported previous ideations or attempts that came to the attention of school authorities among these victims. Basically, this means that it is imperative to identify suicidal students because, once identified, it is likely that their suicide can be prevented. It was only those students who never came to the attention of crisis team members that later took their own lives.

While these data cannot be conclusively linked to the programs, taken together, they meet some of the epidemiological criteria for supporting the possibility of causal relationships. These criteria include consistency of findings across studies, temporal sequence of exposure and outcome, and logical plausibility of the relationship (Potter, Powell, & Kachur, 1995) and provide encouraging initial support for comprehensive, community-oriented prevention approaches. These data also provide additional strong evidence against the myth that talking about suicide with youths will promote suicidal behavior.

Summary and Recommendations

School-based suicide-prevention programs emphasize competencies involved in obtaining help, including knowing the warning signs, dispelling suicide myths, connecting to resources, and resolving to take action. In addition, classroom lessons for students should not be implemented until all adults in the school have received education about suicide and have been informed about policies and procedures for identifying and responding to at-risk students and until schools and community services have coordinated referral and treatment procedures.

School-based suicide-prevention programs should be well-grounded in theory and supported by empirical research. Comprehensive school programs need to link the school with appropriate resources. There is some evidence to support the assumption that school-based programs can reduce suicidal behavior and save lives. However, lives can be saved only through a well-coordinated system that identifies students who have experienced suicidal behavior and gets them immediate help. All school staff and students need to be trained to refer suicidal youths for appropriate help.

School psychologists and other school mental health professionals can fill several important roles in regard to school suicide-prevention programs. Their training places them in a unique position to provide current, accurate information on empirically supported approaches, conduct training on risk assessment and crisis intervention, provide indicated programs, and facilitate collaboration between community service providers and schools.

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Endnote

[1]Guidelines for the Implementation of School Programs, including a sample curriculum outline, are available from the American Association of Suicidology.